

FACE THE FACTS

HAZ ALERT



To prevent falls from ladders while working:

- Make sure that an extension or straight ladder are erected according to the “4 to 1” rule of thumb.
- Safe work practices should be established by the employer for ascending and descending extension or straight ladders with materials and/or equipment.
- All non-self-supporting ladders should be secured at the top and stabilized at the bottom.
- While working from ladders, workers should wear appropriate footwear.

Workers Killed in Falls From Ladders

During 2004, 44 hospitalizations resulted from workers falling off ladders. The average hospitalized length of stay was 3.29 days and the average total hospitalization charges were \$21,274. Eighty-four percent of the injured workers suffered fractures and 12% suffered traumatic brain injuries. From April 2005 to April 2006, there were 5 ladder-related worker fatalities in Kentucky.

Following are case descriptions for four Kentucky ladder-related fatality cases:

Case 1: A 43-year-old male environmental technician died in a manufacturing plant while inspecting a leaking factory equipment pipe. The technician was up on a ladder 6 feet off the ground and removed an inspection plate. Material escaped from the leaking pipe, knocking the worker off the ladder and down onto the concrete floor below. A co-worker found him and he was transported to a nearby hospital where he was pronounced dead.

Case 2: A 61-year-old male self-employed laborer fell to his death while trimming a tree at a residence. While trimming the tree, a limb dropped down onto the base of the



ladder throwing the laborer 30 feet to the ground below. The laborer was transported to the nearby hospital where he was pronounced dead.

Case 3: A 43-year-old male Hispanic laborer was killed after a ladder fall at a residential homebuilding site. The laborer was handing tools to residential framers while standing on the 4th rung of the ladder. The laborer fell from the ladder onto the ground and hit his head. The laborer was transported to a nearby hospital where he died 4 days later from the head injury.

Case 4: A 38-year-old male Hispanic day laborer hired by a residential roofing company died when he fell 10 feet from a ladder. The laborer was done for the day and was descending the ladder while carrying a bundle shingles. The laborer fell from the ladder and struck his head. He was transported to a nearby hospital where he died 3 days later.

SECURE ALL NON-SELF-SUPPORTING LADDERS AT THE TOP AND STABILIZE THEM AT THE BOTTOM.

Make sure that an extension or straight ladder are erected according to the “4 to 1” rule of thumb.

Always inspect your ladder before use. Ladders must be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect its safe use (1926.10533 (b)(15)). Ladders should be erected at a 75° angle of inclination (ANSI standard A14.2-1990). The “4 to 1” rule says if a 12’ ladder is erected by a wall, then the base of the ladder should be 3’ away from the wall (for every 4 feet of ladder, the ladder should be placed 1 foot from the supporting structure). When used for access to an upper level, the ladder side rail should be at least 3 feet above the upper surface (Subpart X-1926.1053(b)(1).

Safe work practices should be established by the employer for ascending and descending extension or straight ladders with materials and/or equipment.

Never load a ladder beyond the maximum intended load beyond the manufacturers rated capacity (1926.1053(b)(3)). Workers should not carry any materials or equipment that might cause the employee to lose their balance or fall (Subpart X-1926.1053 (b)(22). Heavy materials should be hoisted and smaller materials or objects should be placed in a belt (Canadian Centre for Occupational Safety and Health). Never over-reach or lean to one side of the ladder. The worker should have at least one hand free to ascend and descend the ladder (Subpart X-1926.1053(b)(22) and maintain 3-point contact with the ladder, and the employee should face the ladder while ascending

and descending (Subpart X-1926.1053(b)(21). 29 CFR 1926.1060 requires a training program for each employee using ladders.

All non-self-supporting ladders should be secured at the top and stabilized at the bottom.

Ladders erected in work areas where possible displacement exists, should be secured and tied at the top (Subpart X-1926.1053(b)(8). Ladders should only be erected on stable and level surfaces, and if this is not possible, the ladder needs to be secured (Subpart X-1926.1053(b)(6). To further prevent slipping, the ladder should also be secured at the bottom.

While working from ladders, workers should wear appropriate footwear.

The ladder should be free of slipping hazards (Subpart X-1926.1053(b)(2). Clean dirty soles of shoes before ascending a ladder and don’t climb with wet soles. All footwear should be slip-resistant (Canadian Centre for Occupational Safety and Health).

References:

1. FACE report #52-4-2000- “Construction contractor killed by fall from a ladder– Washington State, FACE, Safety and Health Assessment & Research for Prevention, Washington State Dept. of Labor and Industries, Olympia, WA.
2. FACE report #96MN08701- “Farmer dies of injuries sustained after falling 20 feet from silo. Minnesota FACE, Minnesota Dept of Health, St. Paul, MN.
3. Kentucky Occupational Safety and Health Standards for the Construction Industry, Kentucky Department of Labor, Frankfort, KY.
4. Canadian Centre for Occupational Safety and Health, Hamilton, Ontario, Canada.

For more information, contact:

Kentucky Injury Prevention and Research Center (KIPRC)
333 Waller Ave., Suite 206
Lexington, KY 40504
1-800-204-3223 (toll-free)
www.kiprc.uky.edu